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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/068,087	02/06/2002	Feniosky Pena-Mora	MIT-086BUS	7377
22494 7590 11/29/2007 DALY, CROWLEY, MOFFORD & DURKEE, LLP SUITE 301A 354A TURNPIKE STREET CANTON, MA 02021-2714			EXAMINER STEVENS, THOMAS H	
			ART UNIT 2121	PAPER NUMBER
			MAIL DATE 11/29/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/068,087	Applicant(s) PENA-MORA ET AL.	
	Examiner Thomas H. Stevens	Art Unit 2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12, 14, 16-18 is/are rejected.
- 7) ☒ Claim(s) 11, 13 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>05/10/2007 12/13/2006</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Section I: Change of Ownership

1. The change of ownership, as required by 37 CFR 1.48(a), submitted on 10/03/2006 to add inventors Michael Li, SanHyun Lee and Margaret Fulenwider is accepted. The inventorship has been changed as follows: Feniosky PENA-MORA, Moonseo PARK, Michael LI, Sanghyun LEE, and Margaret FULENWIDER.

Section II: Allowable Subject Matter

2. Applicant is advised that the Notice of Allowance mailed is vacated (as indicated in the prosecution, 1/10/07). If the issue fee has already been paid, applicant may request a refund or request that the fee be credited to a deposit account. However, applicant may wait until the application is either found allowable or held abandoned. If allowed, upon receipt of a new Notice of Allowance, applicant may request that the previously submitted issue fee be applied. If abandoned, applicant may request refund or credit to a specified Deposit Account.

Section III: Non-Final Rejection

Claim Objections

3. Claims 11, 13,15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1-10,12,14,16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pollalis et al (US Patent 5,016,170; hereafter Pollalis) in view of Koskela, titled, "Management of Production in Construction: A Theoretical View"; hereafter Koskela. Koskela teaches a project management tool.

Per claims 1-10,12,16-18 Pollalis teaches

- having plurality of activities, (figure 6)
- wherein each or the plurality of activities has one or more activity time precedence relationships (figure 8, "planned duration of days")

- adding activity characteristics data to the project plan data (figure 23, "activity")
- downstream activity (figure 8, "total" section, planned duration day 8 to 10 reflects a downstream activity)

but Pollalis fails to teach reliability buffering to which Koskela teaches

- reliability buffering (the Office interprets 'reliability' as inherent in terms of the context of this construction project planning model; pg.250, lines 4-12)

At the time of invention, it would have been obvious to one of ordinary skill in the art to modify Pollalis by way of Koskela since Koskela teaches methods in avoiding excessive buffers; avoiding low cost production; avoiding working in suboptimal conditions; and avoiding the cascade of pointwise deviation to other tasks (Koskela: pg. 249-251, last line to lines 1-2, respectively)

Per Claim 3 Pollalis teaches

- one or more activity time precedence relationships (figure 8)

Per Claims 4, 9, Pollalis teaches

- one upstream activity (figure 10, the total time of the upstream activity)

Per Claim 7 Pollalis teaches

- activity characteristic data ("characteristic data" is a broad term; Office interprets this limitation as the data depicted in figure 13) adding an activity production rate(column 1, lines 33-36,"production rate")

Per Claim 12 Pollalis teaches

- analyzing (user's choice) the simulated project schedules (figures 8 and 9) and the simulated project costs associated project schedule (figures 8 and 9) corresponding to a smallest simulated project schedule or associated with a smallest simulated project cost (well known objective to any financially- based project).

Per Claim 14 Pollalis teaches

- adding policy data (specification, pg.14, lines 24-30, regarding manpower availability vs. time values, overtime; figure 23, "Manpower Display") to the project plan data.

Art Unit: 2121

- **Per claims 17-18 Koskela teaches**

conventional project plan data (example of car production data that would be integral to the production planning process, pg.247, lines 1-19)

- **Per Claims 17-18 Pollalis teaches**

project data processor (inherent part of a computer, column 4, lines 442-45)

Section VI: Response to Arguments

7. Applicants' arguments, see 10-11, filed 10/03/2006, with respect to the rejection(s) of claim(s) 1-18 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Pollalis and Koskela.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure:

- US Patent 5930156 teaches a computer software system for modeling a process capability on a computer is provided. The computer software system comprises an operation model type for defining a plurality of operation models (33, 36, 44, 52 and 57). Each operation model represents an activity that can be performed by a process. A resource model type is for defining a plurality of resource models (32, 38, 40, 46, 48, 54, 56 and 58). Each resource model represents capacity available for use in performing an activity and rules for allocating capacity to the activity. A buffer model type is for defining a plurality of buffer models (34, 42, 50, and 60). Each buffer model represents rules for controlling a flow of material between activities. The operation model type, buffer model


Art Unit: 2121

type, and resource model type each comprise a plurality of fields defining attributes that include a plurality of extension selector fields. Defined operation models, buffer models, and resource models are stored as nodes in an interrelated process network model.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mr. Tom Stevens whose telephone number is 571-272-3715.

If attempts to reach the examiner by telephone are unsuccessful, please contact examiner's supervisor Mr. David Vincent 571-272-3080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Answers to questions regarding access to the Private PAIR system, contact the Electronic Business Center (EBC) (toll-free (866-217-9197)).


David Vincent
Supervisory Patent Examiner
Tech Center 2100